## Consumer Industry Perspective

NREL ESIF Workshop, October 2011
Tim Enwall, Founder and CIO



## Agenda



#### A word about Tendril

- Who we are
- What we do
- The value we bring
- Industry Perspective
  - Key consumer trends
  - Key energy provider & regulatory trends
  - · A vision for our future

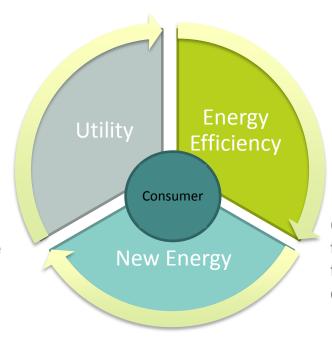
# The Energy Internet A connected, self-reinforcing, energy ecosystem



Tendril is an Energy Platform company that has developed an open standards-based, scalable and secure technology for the Energy Internet – the network for existing grid and Smart Grid technologies.



Energy providers gain real-time information and control to manage and optimize resources.





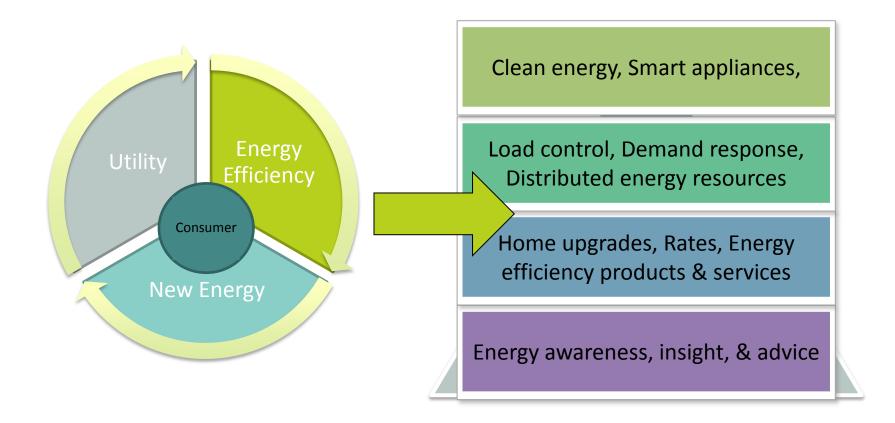
Consumers get powerful insight into their consumption and have the ability to control their spending and environmental impact.

Product and service providers can innovate within a connected energy ecosystem.



# Smart Energy Enabling a consumer-centric ecosystem

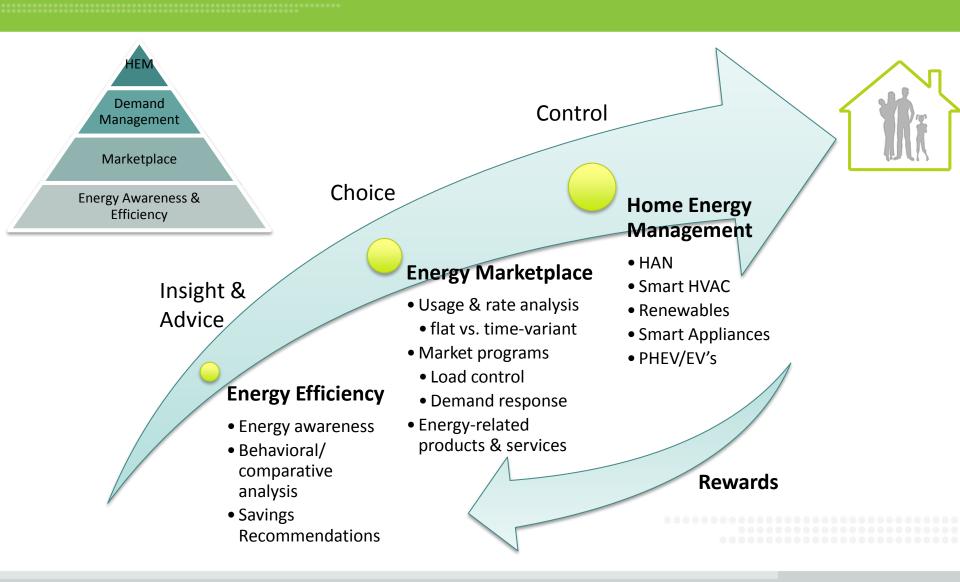




#### **Consumer Model**

#### Engagement leads to higher levels of participation





### **Tendril Corporate Overview**



- HQ in Boulder, CO
- Proven, Global Team
- Well funded \$67M to date
- Complete first acquisition of GroundedPower
- Involved in more than 30 Smart Grid projects
- Industry Leading Partners
- Recognized and Award Winning Company
  - World Economic Forum 2011 Technology Pioneer
  - "Going Green" Winner
  - "Always On Global 250" Winner
  - Ranked in Global Clean Tech 100









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#### **Consumer Trends**





Modern-ization

- Cloud, Digital Enablement everywhere
- Software that thinks for us

**Environ-ment** 

- Awareness of social responsibility
- Significant increase in recycling



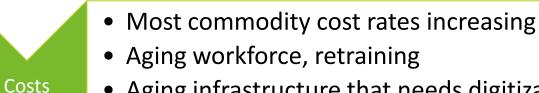
Business models

- Software, apps should cost pennies
- I'll give up privacy for lower cost

# Energy Provider Trends Energy providers are under siege...







Aging infrastructure that needs digitization

**Environ-ment** 

Carbon costs, taxes, regulation

Renewable integration, reliability

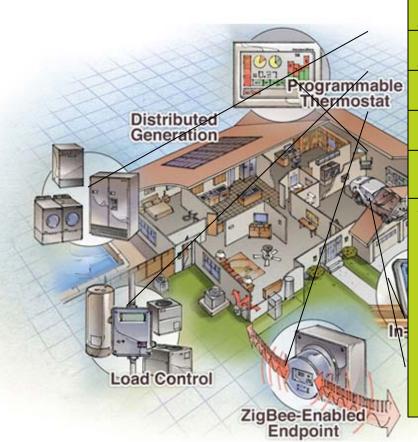
Business models

- Best customers becoming self-sufficient
- Digital providers creating more efficiency

#### A vision for the future







Appliances that sense; respond
ALL loads that aggregate
Gateways that are invisible
Comfort that is optimized
Information that offers wisdom

#### Vehicles that help; don't hurt

- Charged under optimal grid conditions
- Know what/when I want to drive, how far
- Covers me in emergencies
- Capable of providing local storage, frequency
- With no inconvenience

Picture courtesy Landis & Gyr via Earthtech

Agenda



# Thank You!